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No 88

An

Inaugural Dissertation

on

Hydrothorax

by

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of Virginia

Passed March 22d 1823

March 3rd 1823.

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Dropsy is defined to be a preternatural collection of serous or watery fluid in the cellular substance or different cavities of the body, It receives different appellations according to the particular situation in which it is lodged, when located in the cavity of the chest it is called Hydro=thorax or Hydrops Pectoris, it is of this form that I propose to treat

This is a disease of ancient date, and has been placed among the opprobria Medicorum of the Healing=Art, among many others we have the high authority of Cullen who sais it is incura=ble, altho' not prepared to go so far, I can rea=dily believe that it is one of those diseases, in which we will often find our remedies unavailing, and in some cases not even palliative, yet in some in=stances we have checked its progress and in a few cases effected an entire cure

Dropsies are among those diseases, which are extremely difficult to manage, and Hydrothorax

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has generally been considered one of its most in=
=tractable forms. whether it is the most unmana=
geable of the dropsies or not, there exists the discor=
=dant testimony of Practitioners. That it was so
was almost universally admitted by the Ancients,
and even to a late period, but since there has been
a revolution in its treatment, it is considered as
that form in which we shall be lep baffled in
our attempts to cure. This discrepancy of sentiment
can only be reconciled by supposing the present
plan of treatment is more successful than that
formerly adopted

The Symptoms characteristic of Hydro=
=thorax are difficulty of breathing with
oppression of the Breast, particularly on motion
or whilst in a horizontal posture, sudden star=
=tings from sleep with Palpitation, Anxiety, irregular
pulse, pale countenance, Oedema of lower extremities
cough, sometimes Syncope, and a diminution of
the secretions of Urine, which if allowed to stand

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deposites a pink coloured sediment, besides these symptoms the patient when performing certain motions is sensible of evident fluctuation in the cavity of the thorax

Corvisart considered fluctuation (which may be perceived by striking the sternum whilst in an erect position) as the most certain and distinguishing symptoms

The late ingenious Bichat mentions that all the symptoms are agravated by pressure on the abdomen and this he considers as the best diagnostic

By attending to the symptoms before enumerated conjoined with these last Hydrothorax may be distinguished

The Diseases with which it is most liable to be confounded, are. Asthma, Empyema, Angina Pec=
=toris and organic affections of the Heart & Aorta

Its Causes are indulgence in spirituous liquors, ex=
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of the Abdomen, also preceding diseases, as Intermittants, Asthma, Pulmonary Consumption, Dysentary, Diarrhoea, Gout, some of the Exanthemata especially Scarlatina, suppression of accustomed evacuation or repulsion of some eruption, and numerous other causes, among the most frequent causes (tho' not generally mentioned by writers) are ill cured pleurisy and protracted catarrh.

The manner in which Hydrothorax is produced by these affection is very obvious. The Lungs in both being in a state of inflamation, and consequently engorged, the circulation indeavouring to relieve itself from this state of oppression throws out effusions, which the absorbents not taking up collects constituting the disease in question.

In every cavity of the body a fluid is continually thrown out by the exhalents, which is taken up by the absorbents, Dropsy may therefore be produced in two ways: first by Exhalents throwing out of more than a usual quantity, while the absorbents are

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not altered, or by the exhalents not taking up their accustomed quantity, whilst the exhalents are in a healthy state

It may also prevail in two opposite states of the System. In the one the vessels excited, to relieve themselves throw off a preternatural quantity, and in the other being debilitated, and relaxed, they can=not restrain their contents from effusion; this fluid may be effused in one or both cavities of the Pleura or Pericardium, and it may though seldom exist in Hydatids, it is most frequently found in both sacs of the Pleura.

It is not uncommon to find that Hydrothorax has ex=isted sometime before the Patient is aware of it, being only troubled with slight oppression of the chest at night, and being easily fatigued on exertion.

Hydrothorax commences with uneasiness oppression at the Scrobiculus Cordis, Dyspnoea, which is aggravated in ascending a hill, or on going up a flight of stairs, the respiration is

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also more difficult at night whilst in a hori=
=zontal posture, with palpitation, a hard dry cough
which, after sometime, is attended with mucous
expectoration, thirst, which sometimes is excessive
and at others inconsiderable, frequently Oedema
of the lower extremities, generally pale though
sometimes yellow complexion, face is swelled par=
=ticularly in the morning and pits upon pressure
with the fingers which remain after their removal,
the urine is diminished in quantity (and this
is generally one of the first symptoms) depositing
commonly a pink coloured sediment, these symptoms
are followed by a wasting away of the flesh, and
general debility, when we have all these symptoms
there can be little doubt of the existence of water
in the thorax, which may be confirmed by the
diagnostic symptoms of Corvisart and Bichat
before enumerated

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excessive, Sleep is interrupted by frightful dreams and the patient wakes with a sense of suffocation and is obliged to place himself in an erect posture, — violent palpitations — convulsion of the respiratory muscles, together with those of the upper Extremities the mouth is thrown open, as he appears to suffer much from want of fresh air — The pulse is weak and intermits to an extent scarcely to be met with in any other diseases — the countenance is anxious and ghastly — The cheeks and lips are livid — coldness of the Extremities — pain from the breast towards the insertion of the deltoid muscle, or in the side, the body is covered with a cold clammy sweat — insensibility — delirium or coma — Sometimes the patient has a sensation of water moving in the chest when he suddenly changes his position — There is great want of sleep and sometimes bloody expectoration, when diarrhoea is very apt to ensue.

Prognosis. This is generally unfavourable.

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It was the opinion of Cullen, and the writers before his time that Hydrothorax was utterly incurable. Death takes place from the large quantity of water producing suffocation, and may occur suddenly, but spitting of blood commonly precedes death a few days, sometimes the disease ends in general dropsy, which not unfrequently accompanies it from the commencement

Dissections show water in one or both Pleura but commonly in both, and sometimes, also in the brain abdomen cellular texture and principal cavities of the body. The fluid effused resembles the serum of the blood and varies very much in quantity, being from a few ounces to several pounds. From the pressure made by it on the lungs, they are found very much reduced in size. When connected with general dropsy, it is not uncommon to find some of the abdominal viscera in a scirrhus state

Treatment. This depends on the state of the system Remedies which would prove beneficial in the tonic

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would produce oposite effects in the atonic state of the system, Dropsy formerly was supposed to consist chiefly if not always in the latter state, but subsequent experience has proven it to exist equally as common if not more frequently, when there is a considerable degree of arterial action. In the early stages at least it is generally conceeded to be inflamatory, which is evidently shown by the symptoms, viz, pain in the side, an active but irritated pulse, and if blood be taken it puts on the buffy coat, but what is still more conclusive, the relief produced by the antiphlogistic plan of treatment, This being the case, venesection is obviously demanded, and should be carried to a greater or less degree according to the nature of the symptoms, bleeding is a remedy of the first importance, and one on which we should place our greatest dependance After V.S ~~is carried~~ is carried as far as it can with propriety we may make use of topical blood-letting and in some cases with striking advantage, and very much to the relief of the suffering patient

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It is sometimes used to the exclusion of general blood-letting by Practitioners, but this practice I conceive places too much confidence in it, and by its adoption we should hazzard not only the life of our patient, but our own reputation as well as the happiness of his friends. The manner in which blood-letting operates is by relieving the blood vessels from their engorged condition, and which if not relieved in this way, will relieve themselves by throwing of ~~the serous portion~~ of the serous portion of the blood

Emetics, which at one time were considered of so much importance in the treatment of dropsies are now but seldom prescribed, yet I think they would in some cases be of utility, we know sometimes there is considerable gastric disorder, hot dry skin, furred tongue, and as we cannot purge with freedom, it is probable that emetics would not be without benefit for besides relieving those symptoms, they powerfully promote absorption and dissipates congestion

It is a fact, I believe, universally admitted, that we cannot purge with that freedom in Pectoral affections

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that we do in diseases affecting locally any other part of the of the body. Even in Pleurisy we cannot purge to that extent that we do in other cases of acute inflamation

The next remedy that presents itself are Blisters, they probably act on the principle of counter irritation, and by the discharge they excite directing the flow of serum to another part. To avail ourselves of their full effects in this way they should be repeatedly applied, or their action kept up by Savine Cerate or some other application of the same nature. With the same views Setons and Issues, have been used and probably not without utility, yet I suppose they are inferior to blisters, from their discharge not being analogous to the effusion in the chest, whilst that from Blisters is.

Diuretics in Hydrothorax as well as the other forms of Dropsy, hold a very important station, In the inflamatory stage Nitre is the best, It should be given in large quantities largely diluted, an ounce to a quart of water may be taken during the day.

After inflamatory action is subdued and before debility has taken place, is the time, at which our remedies

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would have most effect on the disease; and here a combination of Calomel and squill is an invaluable remedy, as well as in a more debilitated state, It acts not only as a diuretic but also as a sialagogue, when the mouth becomes affected we are assured that the system is open to impressions and may predict a favourable issue. When the system is completely under the mercurial impression, we may leave off the calomel, but continue the squill It is recommended by that able practical writer Van Swieten, and Cullen also to give the Squill in large doses, so as to keep up a constant nausea, but this to the patient is extremely unpleasant, and the danger of vomiting is incurred, which in future greatly tends to prevent its use as a diuretic, Perhaps it would better to reach as largely as possible not to induce nausea

Garlic is also a valuable remedy in the management of this disease. This medicine is a stimulating diuretic, and is especially salutary, when there is a convulsive spasm of the respiratory apparatus.

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The Colchicum Autumnale was at one time considered of great importance in the treatment of Hydrothorax. Storck, Collin and Schenck have recommended it very highly in Hydrothorax as well as other dropsies but it has gone into disuse; yet there are some Practitioners who repose considerable confidence in its powers though it is very seldom prescribed. It is not unlikely the colchicum would do good in many cases, it being actively diuretic as well as expectorant.

Digitalis has by some been highly extolled in Hydrothorax. Among its greatest advocates is Hamilton, who has heaped upon it the most lavished praise. On the other hand there are Practitioners of equal authority, who have been so uniformly disappointed with it, that they now rarely prescribe it. The Physicians of this City (Philadelphia) particularly have almost entirely abandoned its employment. It appears to be best adapted to those cases of weak action when there is irritability of the system. Withering whose experience with it was very extensive, considered it never

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Diaphoretics have been recommended in Dropsy, they act beneficially by relaxing the skin when it is hot and dry, and sometimes they change their usual mode of action, to that of Diuretics, but their action is generally so feeble in this way when they take a determination to the kidneys, that they are scarcely worth noticing.

We next come to the consideration of Diet, the diet in the most common (toric) form of Hydrothorax, should be low. the stomach should at no time be loaded, as at any time, but more especially at night, it gg= =gravates the dyspnoea and oppression, The Patients should not therefore eat for sometime before going to bed, by thus living abstemiously we promote absorption by lessening action, and not unfrequently we diminish the effusion; or suspend its progress which might otherwise be rapid, but this mode of living will not answer in atonic dropsy. In this case we should support the system by a generous diet but

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Concerning Drinks there was at one time great diversity of sentiment. One set of Practitioners forbid the use of fluids altogether, whilst another set allowed them to be drank very profusely, and even enjoined a considerable quantity to be taken. It was stated by the former, that absolute cures had been effected by abstinence from drink. It is I believe now fully ascertained, that it may be indulged in, moderately, not only with impunity but with decided utility. It was formerly supposed that drinks were injurious by increasing the watery parts of the blood and thereby encouraging effusion, but the opinion now prevalent, and which seems to be founded on actual observation and experience is, that by not allowing fluids, the Kidney became so inactive as to perform their office very imperfectly, and by permitting drinks the Kidneys are stimulated to secrete more copiously and thereby promote absorption and lessen the effusion

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=fore mentioned

The Drinks should consist of water impregnated with
Tartaric, Citric acid, or any of the vegetable acids.
In the atonic form of Hydrothorax the patients may be
allowed Whiskey and water or Gin & Water, Sir George
Baker, Sir Francis Milman and Cullen have all witnes
their beneficial effects.

I have now finished the history of the Symptoms
and treatment of Hydrothorax, which I conceive will
apply to the generality of cases as they are usually
met with. Like other diseases Hydrothorax is so
much modified by various causes that it would be
impossible for me at this time to treat of it more fully
I forbear to say more, in the expectation that this im=
=perfect essay written solely in conformity to the regula=
=tions of the School, may be found to answer the
purpose for which it is intended.

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